Generosity

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First version: April 2003
This version: February 2007

Stockholm School of Economics
Working Paper Series in Economics and Finance, No 664

Abstract

We develop a simple model of generous behavior. It is based on the premise that some people are generous, but everyone wants to appear generous. Although non-monetary donations are always inefficient, our model predicts donors to favor non-monetary donations when the inefficiency is relatively small and when the recipient is sufficiently rich. The model helps to explain the prevalence of volunteering, the nature of Christmas gifts, and the taboo against paying cash in return for friendly favors. The model also explains why it is socially more acceptable to ask for favors than for money.

JEL CLASSIFICATION: A13, J20
KEYWORDS: Altruism, non–monetary gifts, volunteering.

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We are grateful to the Torsten and Ragnar Söderberg Foundation (Ellingsen) and the Swedish Research Council (Johannesson) for financial support. Thanks to Tomas Broberg, Mike Burkart, Simon Gächter, Andrew Postlewaite, Lisa Román, Paul Segerstrom, Jean–Robert Tyran, Robert Östling and seminar participants at CERGE-EI, ECARES, Copenhagen University, Stockholm School of Economics, Stockholm University (IIES), and University of Zürich for their generous comments. Errors are ours.

1 Introduction

Why is it sometimes acceptable to ask colleagues, friends and neighbors to help out with a removal, getting amateur service from people who never contemplated entering the removal business, but unacceptable to ask the very same people to sponsor a professional removal? And why do people volunteer for charitable causes even when it would generate larger benefits for the recipients if the donor spent the hours at work and donated the wage? Conventional economic thinking suggests that these practices are plainly inefficient and should not exist.

The same is true for Christmas gifts. Waldfogel (1993, 2002) finds that a conventionally computed deadweight loss of Christmas is sizeable. Donors sometimes buy suboptimal presents, the average efficiency loss being estimated at about ten percent of the purchase price. In addition, donors spend valuable time and effort in order to find an optimal present.[1]

Like Mauss (1925) and Titmuss (1971) we believe that volunteering, help, and gifts are due to values and norms that encourage donations of time and effort, but not necessarily of money. The challenge is to understand why these seemingly inefficient norms emerge.

We suggest that the main reason for non–monetary generosity is that people give not only in order to benefit the recipient but also in order to appear generous in the eyes of the recipient or other observers. As Becker (1974) noted in his seminal article on altruistic behavior, much generosity is displayed because people care about esteem.[2] Although a non–monetary gift is less valuable to the recipient, it may nonetheless be a cost–effective way for the donor to signal altruism and attain the associated esteem. The argument runs as follows. If it is valuable for the altruist to be recognized as such, donations serve as signals and will be distorted upwards relative to the full information benchmark. A reduction in this distortion would be valuable to the donor. We assume, realistically, that altruistic donors have a comparative advantage in making non–monetary donations. For example, although most people may find it onerous to buy Christmas presents or to help out with removals, the effort cost is smaller for altruistic donors than for egoistic donors. Hence, the

[1] Solnick and Hemenway (1996) and List and Shogren (1998) have found that recipients often attach a material value to gifts that exceed the gifts' cost, hence questioning our premise that non–monetary gifts are inefficient. Waldfogel (1998) argues that the anomaly might be due to the sizeable difference between people's willingness to accept (WTA) and their willingness to pay (WTP).

[2] We have chosen to use the word "esteem" because it has been carefully defined by Brennan and Pettit (2004). However, words like approval, prestige, and respect have almost exactly the same meaning.

non–monetary donation necessary to distiguish oneself as an altruist is smaller than the corresponding monetary donation.

Here are four of the predictions that emerge from our model. First, non–monetary donations are symbolic. When altruism is sufficiently strong, the transfer motive dominates, and donations are monetary. Second, because the transfer motive always plays some role, non–monetary gifts are more likely when they are relatively efficient. Third, even if efficiency is desirable as such, large acquisition costs may be justified as long as altruistic donors have smaller acquisition costs than egoistic donors. Inefficiencies associated with personalization of the gift are thus often acceptable. Fourth, whenever altruistic recipients have a comparative advantage in receiving non–monetary favors, it is socially more acceptable to ask for non–monetary favors than for monetary ones. In particular, requests for assistance are more legitimate when execution of the favor requires recipient presence. It is more legitimate to ask a colleague to help out with a problem in one's presence than in one's absence.

The idea that people seek esteem is accepted by social psychologists and economists alike.[3] Even self–esteem is heavily affected by others' opinions. As Veblen (1934, p.30) put it: "the usual basis for self–respect is the respect accorded by one's neighbors". For evidence that desire for social approval is important for charitable giving, see for example Schwartz (1967), Satow (1975), Harbaugh (1998a,b) and Andreoni and Petrie (2004), Soetevent (2005), Dana, Cain, and Dawes (2006), and Broberg, Ellingsen, and Johannesson (2007).[4] Nelson and Greene (2003) is a booklength discussion of people's desire to signal their goodness and the consequences of this desire for social organization.

The notion that money makes it too easy to fake regard, and that personalized gifts are therefore more credible, has been discussed by Zelitzer (1994), Carrier (1995), and Offer (1997) among others. Robben and Verhallen (1994) report that recipients significantly prefer gifts that are costly in terms of time

[3]For typical views on approval in anthropology and sociology, see Homans (1961), Coleman (1990, 129–131), and Wright (1994). Becker (1974) mentions several classical references, as does Offer (1997). For a more comprehensive literature review covering all social sciences, see Brennan and Pettit (2004). Here, we would just like to reiterate Adam Smith's thoughtful passage: "What is the end of avarice and ambition, of the pursuit of wealth, of power, and preheminece? Is it to supply the necessities of nature? The wages of the meanest labourer can supply them ... what are the advantages which we propose to gain by that great purpose of life which we call bettering the human condition? To be observed, to be attended to, to be taken notice of with sympathy, complacency and approbation, are all the advantages which we can propose to derive from it." (Smith, 1753, Ch. ii. 1).

[4]A recent field study by Landry et al. (2006) finds that the beauty of female solicitors is strongly positively related to charitable giving. We think that the social approval motive offers a plausible explanation.

and effort rather than money. This finding squares well with the regard signaling hypothesis, at least if we think that recipients appreciate learning that the donor is altruistic towards them. Lee, Piliavin, and Call (1999) explicitly compare people's motivation for giving time, money, and blood. Volunteering of time is more strongly affected by others' expectations than are donations of blood and of money.[5]

In Andreoni's (1989) model of pure and impure alruism, the opinions of others play no explicit role. The donor's "warm glow" (impure altruism) could be linked to what others think, but formally the warm glow is simply assumed to be more or less proportional to the gift. While this reduced form model is very useful in many applications, it does not explain why people give in inefficient ways. Explicit signaling models of gift giving have been proposed by Camerer (1988), Glazer and Konrad (1996), Carmichael and MacLeod (1997), Denrell (1998), Prendergast and Stole (2001), Bénabou and Tirole (2006), Ellingsen and Johannesson (2006a) and Andreoni and Bernheim (2006). In all of these, gifts are used to credibly communicate information about the donor's type. Camerer (1988) and Prendergast and Stole (2001) are most closely related to our work, as both provide reasons for the existence of non–monetary gifts. Camerer's main story is nonetheless quite different from ours. In his model, inefficient gifts are given only because gift giving is bilateral. Gifts with a low user value prevent people from entering relationships in order to collect gifts. In our model, gift giving is unilateral, and non–monetary gifts are chosen *despite* their inefficiency, because they are harder to mimick by insincere donors.

Like the present paper, Prendergast and Stole (2001) find that non–monetary gifts ought to be more common when the efficiency loss is small and when the donor's altruism is not too large. However, a crucial feature of their model is that altruistic donors have superior knowledge of the recipient's preferences. Therefore, their model is applicable only when the recipient's desires are not too well known. Our model applies even when the recipient's preferences are common knowledge; we can explain why an acquaintance can ask for help with a removal, but cannot ask for money without sacrificing esteem. In fact, our model even allows the recipient's benefit to be monetary, thereby explaining volunteering for charities and generosity in the workplace. Admitting monetary benefits also distinguishes our work from other theories of non–monetary

[5]Relatedly, Ellingsen and Johannesson (2006b) find that people appear more likely to classify a social situation as one in which gift giving is appropriate when they have the opportunity only to give time than when they have the opportunity only to give money. In the present paper, we do not discuss why some situations are construed as suitable for gift giving and others are not.

gifts, including those focusing on donor paternalism (Pollack, 1988), recipient screening (Blackorby and Donaldson, 1988), and donor commitment (Bruce and Waldman, 1991).

2 Model

A donor is endowed with ω_D units of cash and $\bar{t}$ units of time. Time is either spent working, earning a wage of 1 per unit of time, or it is spent helping a recipient. Money buys a single consumption good at a price of 1 per unit. The donor can also transfer money to the recipient. For simplicity, the recipient is assumed not to work and not to help anyone. Thus, the recipient merely consumes an endowment ω_R in addition to any transfers from the donor.

The donor cares both about own consumption c_D and the recipient's consumption c_R. The donor can be either *altruistic* or *egoistic*; the difference is that the altruistic donor values the recipient's consumption more. Let $\hat{h}$ denote the recipient's subjective probability that the donor is altruistic. Besides caring about consumption, the donor would like the recipient, or some other observer, to believe that the donor is altruistic. The donor cannot avoid being observed.

Gifts can be either monetary or non–monetary, and of any size. Mixtures of monetary and non–monetary gifts are ruled out for simplicity; allowing mixed gifts does not substantially alter the analysis.[6] We measure the donor's cost of giving in consumption units, and we also assume that the recipient always receives gifts in the form of increased consumption. While a non–monetary gift may have additional nonmonetary costs or benefits to the recipient, we shall mostly neglect these.[7] The cost to the donor of a monetary gift is denoted g^m, and the cost of a non–monetary gift is denoted g^t. The recipient's consumption increases by g^m and γg^t respectively. Thus, if $\gamma < 1$, the donor is less efficient at helping than at working. Relative to working, the donor also obtains some dissatisfaction from the helping activity itself.[8]

Formally, the donor's utility function is assumed to be additively separable and to consist of four parts: (i) the donor's utility of of own consumption, $d(c_D)$; (ii) the donor's utilty of the recipient's consumption $\alpha_D r(c_R)$; (iii) the

[6]When allowed, mixed gifts are only rarely optimal, and all major results continue to hold.

[7]Non–monetary costs and benefits to the recipient only play a role in Section **??**.

[8]Clearly, one reason for giving time instead of money could be that the donor strongly likes the helping activity. To avoid this trivial explanation for generosity in the time domain, we assume that the donor prefers working to helping (for given consumption levels).

donor's disutility of giving time, $e(\alpha_D)f(g^t)$; (iv) the donor's pride $p(\hat{\alpha}_D)$, where $\hat{\alpha}_D$ is the recipient's expectation of α_D. We refer to $\hat{\alpha}_D$ as the donor's esteem and $p(\hat{\alpha}_D)$ as the donor's pride. To summarize, the donor's utility is

$$u_i = d(c_D) + \alpha_i r(c_R) - e(\alpha_i)f(g^t) + p(\hat{\alpha}), \tag{1}$$

where $i \in \{H, L\}$ and $\alpha_H > \alpha_L$. We assume that d and r are increasing and concave functions, with $\lim_{c_D \to 0} d'(c_D) = \infty$ and $\lim_{c_R \to \infty} r'(c_R) = 0$. We assume that f is increasing, with $f(0) = 0$, and that e is positive and decreasing. We say that the donor is altruistic if $\alpha_D = \alpha_H$ and egoistic if $\alpha_D = \alpha_L$. We further assume that u_i is continuous and differentiable in all its arguments, and make the normalization that $p(\alpha_L) = 0$.[9] [10]

We refer to $d(c_D)$ as the donor's *consumption utility*, to $\alpha_i r(c_R)$ as the donor's *compassion utility*, and to $e(\alpha_i)f(g^t)$ as the donor's *effort cost* (or more generally the cost of intimacy). To the extent that the recipient must also exert effort when receiving a time gift, we assume that the donor neglects this cost. The analysis is similar if the donor's altruism extends also to the recipient's effort costs. Note that donors differ only in their compassion utility and in their effort cost; for a given level of esteem, their pride is assumed to be the same. This assumption is innocuous, but simplifies the exposition.

For simplicity, we also restrict attention to the case where altruism is so modest that

$$d'(\omega_D + \bar{t}) - \alpha_H r'(w_R) > 0. \tag{2}$$

Under this restriction, no donor would give anything were it not for the pride.

Observe that the situation is essentially a signaling game. The donor's strategy is a gift $g = (g^m, g^t) \in \{0\} \times \mathbb{R}_+ \cup \mathbb{R}_+ \times \{0\}$. Upon observing the gift g the recipient forms a belief $\hat{\alpha}$ concerning the donor's expected altruism. Although we abstract from any subsequent actions, the fact that the donor cares about the recipient's belief will generate all the strategic interactions that are typical of signaling games.

For much of the analysis the choice of solution concept is relatively unimportant, because only separating equilibria are of interest. Among separating equilibria, popular refinements tend to pick the outcome that yields the highest donor utility: the best separating equilibrium. Notably, the commonly used Intuitive Criterion of Cho and Kreps (1987) has enough power to pick this

[9] Note that this normalization would turn into a restrictive assumption if the donor could avoid being evaluated along the altruism dimension altogether.

[10] The formulation (**??**) suggests that the donor does not care about the recipient's type. Arguably, people are more altruistic towards other altruists, as suggested by Levine (1998). However, such an extension is largely irrelevant for our analysis.

outcome in our model. (In Section 4, we will discuss some issues that demand a richer model and probably a different solution concept.)

Our key assumption is that the cost of giving time, the effort cost, is smaller for altruists than for egoists: $e(\alpha_H)f(g^t) < e(\alpha_L)f(g^t)$ for all $g^t > 0$. The justification is that the altruistic donor cares for the recipient, and hence finds it less painful to spend time thinking about or interacting with him or her. Buying a present for one we truly love, and helping one we truly like can be almost pleasurable. Precisely therefore, these activities are fine signals. As Camerer (1988, p.S195) points out: "Any net cost of time, energy, or imagination is part of the signaling cost of a gift: the thought does count."

3 Analysis

Before analyzing the full game, it proves useful to analyse the "restricted" games in which the donor cannot choose the nature of the gift, only its size.

3.1 Monetary gifts

Suppose the donor is confined to give a purely monetary gift. With $g^m \in \mathbb{R}_+$ and $g^t \equiv 0$, we can write donor utility as

$$u_i^m = d(\omega_D + \bar{t} - g^m) + \alpha_i r(\omega_R + g^m) + p(\hat{\alpha}(g^m)).$$

Without concern for esteem, the donor would set g^m to maximize $d(\omega_D + \bar{t} - g^m) + \alpha r(w_R + g^m)$. The optimal value of the gift, call it $g_*^m(\alpha)$, would then be given by the first–order condition

$$\alpha r'(w_R + g_*^m(\alpha)) - d'(\omega_D + \bar{t} - g_*^m(\alpha)) \leq 0, \tag{3}$$

with equality if $g_*^m > 0$. By assumption (**??**), it follows that $g_*^m = 0$. Thus, the donor gives nothing unless there is esteem to be had from giving.

Let us now derive the Intuitive equilibrium outome(s). Since the utility function satisfies the single–crossing condition

$$\frac{\partial^2 u}{\partial g^m \partial \alpha} > 0,$$

and the set of feasible gifts is unbounded, the model has one and only one Intuitive equilibrium outcome in the sense of Cho and Kreps (1987), and this is the "best separating equilibrium." The Intuitive outcome thus has the feature that the altruistic donor gives a gift just large enough for the egoistic donor to reveal himself by not giving. More formally, the altruist's gift satisfies exactly

the "upward" incentive constraint

$$d(\omega_D + \bar{t}) + \alpha_L r(\omega_R) \geq d(\omega_D + \bar{t} - g^m) + \alpha_L r(\omega_R + g^m) + p(\alpha_H).$$

Rearranging terms, we see that the altruist's gift g_S^m is given by

$$d(\omega_D + \bar{t}) - d(\omega_D + \bar{t} - g_S^m) = \alpha_L[r(\omega_R + g_S^m) - r(\omega_R)] + p(\alpha_H). \qquad (4)$$

The left hand side is the reduction of consumption utility brought about by the gift, and the right hand side is the associated increase in compassion utility (for the egoist) and pride. In equilibrium, an egoistic donor refrains from giving, because any gift below g_S^m makes the recipient, or other observers, infer that the donor is egoistic, and with no gain in esteem the egoistic donor never gives.

Lemma 1 *If the donor is confined to giving money, the unique Intuitive equilibrium outcome has the property that an altruistic donor gives g_S^m and an egoistic donor gives nothing.*

While the equilibrium gift g_S^m is positive and thus larger than the altruist would ideally have wanted, the price is worth paying in order to earn esteem. Since the altruist's opportunity cost of giving is smaller than the egoist's, there always exists a gift g_S^m that is small enough not to completely dissipate the utility of esteem and large enough to keep the egoist from pretending altruism.

It is often claimed that generous behavior cannot be driven entirely by the esteem motive; see Brennan and Pettit (2004, pages 36–46) for a recent discussion. The argument is that observers only value true generosity, and hence will not appreciate actions that are taken exclusively in order to gain esteem. As Elster (1983, page 66) puts it: "Nothing is so unimpressive as behavior designed to impress." Signaling models such as ours offer a straightforward resolution: Even if pure altruism is insufficient to generate any generous behavior, the combination of true altruism and quest for esteem can be sufficient – even when the latter prestige motive is perfectly understood by all. The reason is that while the differences in true altruism are too small to generate differential behavior in and of themselves (because altruism is too weak to generate positive donations), the differences in altruism will be apparent once the prestige motive is added. Just as an addition of noise can amplify weak sounds to a level where they can be perceived, the prestige motive can amplify altruism to a level where differences in altruism create perceptible differences in behavior. The generous behavior is designed exclusively to impress, yet it succeeds in doing so.

Our next step is to consider gifts of time instead of money. Before doing so, it is useful to define "donation reward" as the net contribution to donor utility from giving a positive gift. Observe that the entire donation reward can here

be ascribed to the presence of esteem. Since the altruist would not have given anything absent the desire for esteem, it is also clear that the donation reward must be smaller than $p(\alpha_H)$. To be precise, the equilibrium reward obtained by the altruist under a purely monetary donation is

$$\begin{aligned}\pi^m &= d(\omega_D + \bar{t} - g_S^m) + \alpha_H r(\omega_R + g_S^m) + p(\alpha_H) - d(\omega_D + \bar{t}) - \alpha_H r(\omega_R) \\ &= (\alpha_H - \alpha_L)[r(\omega_R + g_S^m) - r(\omega_R)],\end{aligned}$$

where the second equality follows from (**??**). That is, the altruistic donor attains a reward that is equal to the compassion utility brought about by the gift minus the compassion utility that an egoist would have felt giving the same gift.

Observation 1 *With purely monetary gifts, the altruist's equilibrium donation reward equals the compassion utility differential associated with the smallest separating gift.*

3.2 Time gifts

Let us next consider the case in which the donor gives time but not money. The donor's utility function can now be written as

$$u_i^t = d(\omega_D + \bar{t} - g^t) + \alpha_i r(\omega_R + \gamma g^t) - e(\alpha_i) f(g^t) + p(\hat{\alpha}(g^t)).$$

Giving the recipient γg^t units of consumption costs the donor $d(\omega_D + \bar{t}) - d(\omega_D + \bar{t} - g^t) + e(\alpha_i) f(g^t)$. The cost is higher than before both because the gift is inefficient ($\gamma < 1$) and because of the effort cost $e(\alpha) f(g^t)$.

Note that the donor would not give a time gift if there were no esteem benefit. This follows from the assumption embodied in (**??**) and the fact that time gifts come with additional costs and no additional benefits.

As above, the Intuitive equilibrium outcome entails a gift by the altruist that precisely satisfies the egoist's incentive constraint

$$d(\omega_D + \bar{t}) + \alpha_L r(\omega_R) \geq d(\omega_D + \bar{t} - g^m) + \alpha_L r(\omega_R + \gamma g^t) - e(\alpha_L) f(g^t) + p(\alpha_H).$$

The crucial observation here is that the egoist wanting to mimick altruism faces an additional cost, namely the effort cost $e(\alpha_L) f(g^t)$. Rearranging terms, we find that the altruistic donor gives a gift g_S^t satisfying

$$d(\omega_D + \bar{t}) - d(\omega_D + \bar{t} - g_S^t) = \alpha_L[r(\omega_R + \gamma g_S^t) - r(\omega_R)] - e(\alpha_L) f(g_S^t) + p(\alpha_H). \quad (5)$$

Again, the egoistic donor gives nothing in equilibrium.

Lemma 2 *If the donor is confined to giving time, the unique Intuitive equilibrium outcome has the property that an altruistic donor gives g_S^t and an egoistic donor gives nothing.*

The level comparison between g_S^t and g_S^m is straightforward.

Observation 2 *Ceteris paribus, the material opportunity cost of non-monetary gifts, g_S^t, is smaller than that of monetary gifts, g_S^m.*

Comparing (**??**) to (**??**) we see that the difference has two separate causes. Non-monetary gifts are smaller both because they yield less utility to the recipient ($\gamma < 1$) and because they are more costly to provide ($e(\alpha_L)f(g_S^t) > 0$). Since the choice of gift will depend on parameters, this observation by itself is not very helpful, however.

The altruist's donation reward from giving a non–monetary gift is

$$\begin{aligned} \pi^t &= d(\omega_D + \bar{t} - g_S^t) + \alpha_H r(\omega_R + \gamma g_S^t) - e(\alpha_H)f(g_S^t) + p(\alpha_H) \\ &\quad -d(\omega_D + \bar{t}) - \alpha_H r(\omega_R) \\ &= (\alpha_H - \alpha_L)[r(\omega_R + \gamma g_S^t) - r(\omega_R)] + [e(\alpha_L) - e(\alpha_H)]f(g_S^t), \end{aligned}$$

where the second equality follows from (**??**).

Observation 3 *With purely non–monetary gifts, the altruist's equilibrium donation reward equals the sum of the compassion utility differential and the effort cost differential associated with the smallest separating gift.*

3.3 Money or time?

Having computed the equilibria of the two restricted games, we are ready to analyze the full game. Being able to choose the nature of the gift as well as its size, what will the donor do? As before, the Intuitive Criterion selects the best separating equilibrium.

Observation 4 *The donor gives money if $\pi^m > \pi^t$ and time if $\pi^t > \pi^m$.*

The proof is straightforward, so we only sketch it. Suppose that the best separating money gift equilibrium yields a higher altruistic donor reward than the best separating time gift equilibrium. The question is whether the availability of time gifts destroys the equilibrium. The answer is negative for the following reason: The equilibrium could only disappear (fail the Intuitive Criterion) if there were a time gift g^t with the property that (i) g^t yields a higher reward to the altruist and (ii) g^t does not yield a higher reward to the egoist. But if such a time gift existed, then it would have induced a separating equilibrium in the restricted game with time gifts only, contradicting the assumption

that $\pi^m > \pi^t$. Suppose instead that the best separating money gift equilibrium yields a smaller altruistic donor reward than the best separating time gift equilibrium. Then, the money gift equilibrium does not satisfy the Intuitive Criterion, because the altruistic donor can defect and give time $g_S^t + \epsilon$, where ϵ is a small positive amount. This defection can never be rational for an egoist, so the recipient should infer that the gift is given by an altruist, whence the defection pays off.

All that remains is to investigate how the various parameters of the model affects $\Delta = \pi^t - \pi^m$, the altruist's advantage from giving non–monetary rather than monetary gifts. The advantage can be written

$$\Delta = (\alpha_H - \alpha_L)[r(\omega_R + \gamma g_S^t) - r(\omega_R + g_S^m)] + [e(\alpha_L) - e(\alpha_H)]f(g_S^t). \qquad (6)$$

Depending on the parameters, Δ can be either positive or negative. If altruism α_H is small (large) relative to the cost difference $e(\alpha_L) - e(\alpha_H)$, Δ is positive (negative) and time (money) gifts are preferred. The efficiency of the time gift also matters.

Proposition 1 *In the Intuitive equilibrium, the likelihood of non–monetary gifts is non–decreasing in the efficiency parameter γ.*

Proof: Differentiate with respect to γ in equation (**??**). From (**??**) we see that g_S^m is independent of γ, whereas from (**??**) we see that g_S^t is increasing in γ. Hence, Δ is increasing in γ. □

Although the result borders on the trivial, and is closely reminiscent of Prendergast and Stole (2001), we emphasize it for three reasons. First, it stands in stark contrast to the result of Camerer (1988), where the whole point of non–monetary gifts is their inefficiency. Second, the result is general, in the sense that it does not rest on restrictive assumptions concerning functional forms. Third, the result seems to fit the empirical evidence on gift giving. Notably, Waldfogel (2002) reports that cash gifts are more often given by donors who tend to give unwanted gifts.

Next, consider the effect of an increase in the recipient's wealth, ω_R.

Proposition 2 *There exists a finite level of recipient wealth $\hat{\omega_R}$ such that the equilibrium gift is non–monetary for all $\omega_R > \hat{\omega_R}$.*

Proof: Since gifts are bounded above by the (monetary equivalent of the) value of esteem, and $\lim_{\omega_R \to \infty} r'(\omega_R) = 0$, the difference $r(\omega_R + \gamma g_S^t) - r(\omega_R + g_S^m)$ goes to zero as w_R goes to infinity. Since g_S^t remains well above 0 (by inspection of equation (**??**)) even in this limit, it follows from (**??**) that $\Delta > 0$ in the limit. By continuity, Δ is also positive for all levels of recipient wealth above some finitely large ω_R. □

The intuition is that the donor's concern for increasing the recipient's consumption becomes unimportant, relative to acquiring esteem, as the recipient gets sufficiently rich. As the concern for the recipient's consumption diminishes, so does the size of the gift. Accordingly, the donor becomes less concerned about the efficiency of the donation, preferring instead to make a non–monetary donation in order to maximize the esteem rent. There is just no point in giving money to a very rich person.[11]

An increase in the donor's wealth does not have a determinate effect on the nature of the gift. On the one hand, the efficiency loss associated with switching from money gifts to time gifts is magnified as the donor gets richer and donates more. On the other hand, as the separating equilibrium gift gets larger, so does the effort cost differential. Depending on functional forms, either the compassion utility differential or the effort cost differential may increase more as the donor gets richer. A similar argument shows that an increase in the donor's valuation of esteem has an ambiguous effect on the nature of the gift.

4 Asking for help

So far, we have assumed that the donor has all the initiative. Suppose now instead that the recipient identifies the opportunity for social exchange. To be specific, consider the removal example that we discussed in the first sentence of the Introduction. A person (potential recipient) decides to move and he contemplates asking an acquaintance (potential donor) for assistance, either physical or monetary. Suppose the recipient can decide not only what kind of help she wants, but also how much. Neglecting mixed gifts, the recipient thus chooses the size of the gift $\tilde{g} \in \mathbb{R}_+$ and the type of gift $i \in \{m, t\}$. Implicit in our formulation is the assumption that the donor cannot respond to a request by giving a positive but smaller gift, or even a larger gift than requested. (Unless the request restricts the donor's options, the model does not provide a role for requests.)

In order to understand the trade–off facing the uninformed recipient, we first analyze the donor's decision in the face of a modest request.

Observation 5 *There is a nonempty set of positive requests that are granted by both types of donor.*

[11] It is tempting to conclude that the propensity to give non-monetary gifts should be everywhere increasing in ω_R. However, such a monotonicity result appears to require additional assumptions regarding the functional forms of f as well as r.

For example, the donor will grant any monetary request smaller than $\bar{g}_P^m$, defined as the solution to

$$d(\omega_D + \bar{t} - \bar{g}_P^m) + \alpha_L r(\omega_R + \bar{g}_P^m) + p(\hat{\alpha}) = d(\omega_D + \bar{t}) + \alpha_L r(\omega_R) + p(\alpha_L). \quad (7)$$

Intuitively, the egoist prefers to pay the cost of helping and getting some average level of pride $p(\bar{\alpha})$ to being exposed as an egoist and getting the level of pride $p(\alpha_L)$.[12] Note that $\bar{g}_P^m$ is the largest monetary request that both donor types agree to. Let $\bar{g}_P^t$ be the corresponding maximal time request.

Faced with an immodest request, the donor's problem is different.

Observation 6 *There is a non–empty set of requests that are granted by the altruistic donor but not by the selfish donor.*

The observation follows immediately from Lemmas 1 and 2. In particular, a monetary request of g_S^m or slightly larger, or a non–monetary request of g_S^t or slightly larger will be granted by the altruist but not by the egoist. Let us say that a request is *modest* if it is granted by both types of donor.

Proposition 3 *(i) Egoistic donors dislike all requests. (ii) Altruistic donors dislike modest requests, but will like some immodest requests if the recipient's expectations are not too optimistic.*

To an egoist, any request "puts him on the spot." Esteem cannot be gained in equilibrium, since any request that is acceptable to the egoist is also acceptable to the altruist. The choice is between giving and maintaining the recipient's prior and not giving and losing esteem. The altruist dislikes modest requests since they are not associated with gains in esteem. However, the altruist may like an immodest request. If the recipient is sufficiently pessimistic, the altruistic donor will be happy about any request slightly exceeding g_S.[13] Such a request provides a valuable opportunity to gain esteem. On the other hand, the altruistic donor dislikes to be taken for granted, as when $\hat{h}$ is large, since there is little scope for gaining additional esteem.

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[12]More formally, only pooling at the requested gift satisfies D1, because (i) there are no separating equilibria and (ii) the pooling equilibrium in which both types refuses to give fails D1. The proof of the latter assertion runs as follows. If both types refuse, it must be because the recipient holds relatively pessimistic beliefs in case the donor acquiesces. However, since there is a larger set of recipient out–of–equilibrium beliefs that justify an upward deviation by the altruistic donor than by the egoistic donor, the supposed pessimistic beliefs violate D1.

[13]The proof runs as follows. When $\hat{h}$ tends to zero, the difference between $p(\alpha_H)$ and $p(\hat{\alpha})$ tends to $p(\alpha_H) - p(\alpha_L)$, and since the egoist is just indifferent between giving 0 and g_S, the altruist strictly prefers giving g_S.

4.1 Recipient's type is known

We assume that the recipient's utility can be written

$$u_j = r(c_R) + \alpha_j d(c_D) - e_R(\alpha_j) f_R(g^t) + p(\hat{\alpha}). \tag{8}$$

The recipient's utility function exactly parallels that of the donor and justifications are the same as above.

Assume to begin with that the recipient is egoistic, with $\alpha_R = \alpha_L$ is close to zero and that this is known to the donor. Since the uninformed recipient has the first move, the situation is essentially a screening problem, but one where the second mover's decision is driven by signaling concerns.

Let $\bar{g}_S^m$ be the largest request that an altruistic donor will grant in any equilibrium. Formally, $\bar{g}_S^m$ is given as the solution to the equation

$$d(\omega_D + \bar{t} - \bar{g}_S^m) + \alpha_H r(\omega_R + \bar{g}_S^m) + p(\alpha_H) = d(\omega_D + \bar{t}) + \alpha_H r(\omega_R) + p(\alpha_L). \tag{9}$$

Relative to the outcome under donor initiative, an egoistic recipient always prefers to ask for larger and (weakly) more liquid gifts.

Observation 7 *A recipient who is known to be egoistic will ask for $\bar{g}_P^m$ if $\bar{g}_P^m \geq \hat{h}\bar{g}_S^m$ and for $\bar{g}_S^m$ otherwise.*

That is, an egoistic recipient requests either the largest monetary gift that the egoistic donor is willing to give or the largest monetary gift that the altruistic donor is willing to give. The choice between the two requests hinges on the belief $\hat{h}$.

4.2 Recipient private information

Let us now turn to the more interesting case in which the recipient may be altruistic and the recipient's type is privately known.

Note first that the single–crossing condition is satisfied for the recipient. More precisely, for given donor beliefs and behavior, the altruistic recipient has more to gain (less to lose) by reducing the requested gift than does the egoistic recipient. Therefore, we can confine attention to the least costly separating equilibrium for the donor.

From Observation **??**, we know that the selfish recipient will ask for money, either $\bar{g}_P^m$ or $\bar{g}_S^m$. Suppose for now that h is large enough to make $\bar{g}_S^m$ the egoistic recipient's optimal choice. If succeeding, the egoistic recipient's equilibrium utility is then

$$u_R(\bar{g}_S^m; \alpha_L) = r(\omega_R + \bar{g}_S^m + \alpha_L d(\omega_D + \bar{t} - \bar{g}_S^m).$$

If requesting money, the altruistic recipient ask for the gift $\hat{q}_S^m$ that just prevents the egoistic recipient from mimicking,

$$u_R(\bar{g}_S^m; \alpha_L) = r(\omega_R + \hat{q}_S^m) + \alpha_L d(\omega_D + \bar{t} - \hat{g}_S^m) + p(\alpha_H). \tag{10}$$

That is, by making a small enough request, the recipient convincingly signals altruism, and is paid esteem.

If requesting time, the altruistic recipient similarly asks for the amount $\hat{q}_S^t$ that solves

$$u_R(\bar{g}_S^m; \alpha_L) = r(\omega_R + \gamma\hat{q}_S^t) + \alpha_L d(\omega_D + \bar{t} - \hat{g}_S^t) - e(\alpha_L) f_R(\hat{q}_S^t) + p(\alpha_H). \tag{11}$$

Note that $\hat{q}_S^t > \hat{g}_S^m$. Thus, the advantage associated with asking for the donor's time is that the gift can be increased without attracting mimickry by the egoist. Since all these arguments hold equally well when h is so small that the recipient prefers to induce a pooling equilibrium among donor types, we have the section's main result.

Proposition 4 *Suppose the recipient's type is privately known. Then, in the unique Intuitive equilibrium outcome the egoistic recipient requests a monetary gift, whereas the altruistic recipient requests either a smaller monetary gift or an intermediate time gift.*

Psychologists have shown that people tend to like others whom they have helped. Jecker and Landy (1969) is a seminal study. The authors had students participate in an experiment where they earned money. Afterwards, one third of the subjects were approached by the experimenter who explained that he was using his own funds for the experiment and was running short, meaning that he may have to stop the experiment before its planned completion. He asked: "As a special favor to me, would you mind returning the money you won?" Another third of the students were approached by the department's secretary, who asked them if they would return the money as as a special favor to the psychology department's research fund, which was running low. The remaining participants were not asked to return their winnings. Afterwards, all the subjects filled out a questionnaire where, among other things, they had an opportunity to state their feelings about the experimenter. The students who had been approached by the experimenter directly liked him best. Jecker and Landy's explanation, endorsed by Aronson (2004), is that helpers seek to justify their action ex post. "Because I answered the request for help, the person must have been deserving." To economists, this reasoning is awkward, as we assume preferences to drive behavior and not the other way around. Our model suggests that interpersonal liking may or may not increase following a request for help, depending on how "personal" the request and the helping

activity are. Although in Jecker and Landy's case the experimenter asked for money, he did so in a highly personal way. Therefore, he was making a sacrifice too. To distinguish experimentally between the two hypotheses is relatively straightforward. If we are right, the liking for the experimenter will be sensitive to how personal the request is. If the psychologists are right, only the content of the request matters.

5 Extensions and Discussion

For simplicity we have focussed throughout on the case in which altruism is so modest that the least altruistic donors give nothing in a separating equilibrium. However, all the important insights remain when altruism is so great that both types of donor give positive amounts. The only difference is that when the least altruistic donors give a positive amount, they always give money; since they do not get the esteem benefit, there is no point for them in making a non–monetary donation. This observation is consistent with Waldfogel's (2002) observation that cash gifts sometimes carry a stigma; the cash gift reveals the donor's relatively low altruism.

Another extension of the model is to allow a continuum of possible levels of altruism. However, there appears to be something wrong with mechanically assuming separating equilibria: In reality, we doubt that the gift size varies continuously so as to signal the donor's altruism exactly. Instead, it seems to us that gifts often come in certain conventional sizes. To capture this phenomenon, the equilibrium would have to be (at least partially) pooling. We shall now turn to a set of arguments that suggest how pooling may come about.

5.1 Social regulation

The social norms concerning gift giving have sometimes been subjected to considerable public debate. This is natural; many people are both donors and recipients, and to the extent that gift giving is socially wasteful, society has an incentive to regulate it. For example, Zelitzer (1994, p79) describes how "At the turn of the twentieth century, as their gift exchanges multiplied, Americans, contemplated, debated, and publicly defined gift transfers." One way to interpret social regulation is as coordination of expectations on a particular equilibrium, for example one that maximizes a weighted sum of utilities for donors and recipients. And in this case, the fully separating equilibrium may do quite poorly. For example, all donor types might sometimes be better off in the pooling equilibrium where no gift is given: In our two–type model, this

happens when h is close to 1; see Mailath, Okuno–Fujiwara and Postlewaite (1993) for a belief–based argument in favor of selecting this equilibrium. On their side, recipients in our model typically prefer equilibria in which an average gift is always given to equilibria in which the gift is sometimes large and sometimes small. Thus, equilibria with relatively uniform gifts can be desirable for recipients and (many) donors alike.[14]

When it comes to the nature of the gift, we have shown that donors often favor non–monetary gifts. By contrast, recipients always favor cash gifts, as cash gifts are both larger and more useful. If both parties know at the outset that the occasion calls for a donation, as for example in the case of a marriage where the guests know that the couple expects gifts, we would expect the balance to be tilted less strongly in favor of non–monetary gifts than indicated by our donor–focused analysis.

5.2 The compensation taboo

In many places, there are taboos against paying cash for neighborly help; see for example Webley and Lee (1993). Likewise, we usually don't pay colleagues and friends for their assistance. The model straightforwardly explains the opposition to such payments. If the recipient makes a positive cash payment, the altruistic donor will have to increase the gift so as to maintain separation. Having done so, the donor's utility is roughly the same as it would have been without the payment. The recipient, however, is worse off, because due to the inefficiencies associated with the transaction the additional help is worth less than the cash payment.[15]

The main exception to the compensation taboo is when part of the donor's costs are monetary and part is non–monetary; monetary costs can be reimbursed without inducing inefficiency. Presumably, this is why famous people (including leading academics) are often asked to contribute their time to various causes while being compensated only for their lodging and travel costs.

Another exception may be the case in which the non–monetary task is indivisible and "to large." By paying some partial compensation, the recipient gets the value of the non–monetary gift down below the critical level $\bar{g}^t$.

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[14]We here eschew attempts to characterize formally the equilibria that would be implemented by some social contract, but we conjecture that the problem can be formulated and solved along the lines proposed by Myerson (1985).

[15]Sometimes, cash payments allegedly even decrease non–monetary donations, a phenomenon that is sometimes referred to as "motivational crowding out." Our model cannot explain motivational crowding out. To do so, the model would need, for example, multi–dimensional characteristics (as in Bénabou and Tirole, 2006), or private information about the recipient's type (as in Ellingsen and Johannesson, 2006a).

We have assumed so far that the donor and recipient both understands which equilibrium is being played, and that the donor has no opportunity to fine–tune the magnitude of the gift following a request. In reality, situations may be more opaque. Think about the embarassments that result when donors and recipients have different expectations: The recipient after being helped takes out the wallet and wants to pay. Suppose the helper had been happy about the opportunity to prove his altruism (a separating equilibrium). The payment indicates that the recipient's request had been intended as a modest request (pooling equilibrium). If so, taking the money implies that the helper has been used — small requests don't pay esteem. Therefore, it may be better to refuse the money and insist that one never even had a thought that money would be paid. If the recipient agrees not to pay, the altruistic helper is happy. However, the very possibility that a helper refuses money is detrimental to modest requests. The egoist may suspect that a refusal to accept money is anticipated, and thus decline to provide help altogether.

6 Conclusion

Becker (1974) emphasized that the quest for social esteem is a major determinant of altruistic behavior. Yet, he opted for a parsimonious model without esteem considerations, as did Andreoni (1989).

We think that generous behaviour is often a matter of symbolic social exchange. The gift is a signal, and the payment is esteem.

Introducing concerns for social esteem into Becker's framework helps to explain symbolic giving in general and inefficient non–monetary giving in particular. Camerer (1988) first proved the point for bilateral giving, and Prendergast and Stole (2001) (building on an idea by Camerer) proved it for unilateral giving when altruistic donors have better information about the recipient's preferences than do egoistic donors.

To summarize the contribution of our paper, consider the following example, due to Camerer (1988, page S193-194)

> When my friend surprises me with an obscure Hüsker Dü recording, he reveals his knowledge of my tastes (along with his willingness to invest) with an efficient gift. His gifts are guesses about what I like, and sometimes these guesses will be wrong; gifts will be inefficient. This occasional inefficiency cannot be avoided by asking me what I like, because even a casual friend could do that. A close friend *must* guess at my tastes (and sometimes err) to distinguish himself from a casual friend.

Prendergast and Stole (2001) formalizes exactly this argument. Our model suggests why the obscure Hüsker Dü recording works fine as a present even if the friend has asked first — indeed even if Camerer writes it on his wish list. Rare recordings are, by their nature, hard to track down. The friend has to trawl the record shops (remember, this was 1988, before everything could be found on the internet). Unless the friend is a record collector, doing so is painful. However, for a truly close friend, the pain is mitigated by the pleasurable thought of handing the present to a dear friend.

Our argument applies beyond gift giving as we normally think of it. Condider courtesy. Right now, we would like to make courteous remarks about previous literature, demonstrating that we understand and like it. However, conventional praise is cheap. (Besides, grading of others' work is considered bad style.) According to the model of Prendergast and Stole (2001), we ought to prove our appreciation by writing something insightful about it. The previous paragraph is one attempt, but we go further. We have carefully checked Hüsker Dü's lyrics for a useful quote with which to end the paper. To our satisfaction, a line on their last studio album, *Warehouse: Songs and Stories* (1987), perfectly captures our explanation for generous behavior: *A man has two reasons for the things that he does. The first one is pride and the second one is love.*

References

Andreoni, J. (1989). Giving with impure altruism: Applications to charity and Ricardian equivalence, *Journal of Political Economy* 97, 1447–1458.

Andreoni, J. and Bernheim, B.D. (2006). Social image and the 50:50 norm: A theoretical and experimental analysis of audience effects, mimeo, UCSD.

Andreoni, J. and Petrie, R. (2004). Public goods experiments without confidentiality: A glimpse into fund–raising. *Journal of Public Economics* 88, 1605-1623.

Aronson, E. (2004) *The Social Animal.* 9th Edition. New York: Worth Publishers.

Becker, G. (1974): A theory of social interactions, *Journal of Political Economy* 82, 1063–1093.

Bénabou, R. and Tirole, J. (2006). Incentives and prosocial behavior. *American Economic Review* 96, 1652–1678.

Blackorby, C. and Donaldson, D. (1988). Cash versus kind, self selection, and efficient transfers. *American Economic Review* 78, 691–700.

Brennan, G. and P. Pettit (2004): *The Economy of Esteem.* Oxford: Oxford University Press.

Broberg, T., Ellingsen, T. and Johannesson, M. (2007). Is Generosity Involuntary? *Economics Letters* 94, 32-37.

Bruce, N. and Waldman, M. (1991). Transfers in kind: Why they can be efficient and nonpaternalistic. *American Economic Review* 81, 1345–1351.

Camerer, C.F. (1988): Gifts as economic signals and social symbols. *American Journal of Sociology* 94 (Supplement), S180–S214.

Carmichael, H.L. and MacLeod, W.B. (1997). Gift giving and the evolution of cooperation. *International Economic Review* 38, 485–509.

Carrier, J.G. (1995). *Gifts and Commodities.* London: Routledge.

Cho, I.-k. and Kreps, D.M. (1987): Signaling games and stable equilibria. *Quarterly Journal of Economics* 50, 179–221.

Coleman, J.S. (1990). *Foundations of Social Theory.* Cambridge: The Belknap Press of Harvard University Press.

Dana, Jason, Cain, D.M., and Dawes, R. M. (2006). What you don't know won't hurt me: Costly but quiet exit in dictator games. *Organizational Behavior and Human Decision Processes* 100, 193-201.

Denrell, J. (1998): Incentives and hypocrisy. Chapter 2 in the PhD dissertation *Essays on the Economics of Vanity and Career Concerns.* Stockholm: Stockholm School of Economics.

Ellingsen T. and Johannesson, M. (2006a). Pride and prejudice: The human side of incentive theory, CEPR Discussion paper 5768.

Ellingsen T. and Johannesson, M. (2006b). Time is not money, mimeo, Stockholm School of Economics.

Elster J. (1983). *Sour Grapes.* Cambridge: Cambridge University Press.

Glazer, A. and Konrad, K.A. (1996). A signaling explanation for charity. *American Economic Review* 86, 1019–1028.

Harbaugh, W. (1998a): The prestige model for making charitable transfers. *American Economic Review Papers and Proceedings* 88, 277–282.

Harbaugh, W. (1998b): What do donations buy? A model of philanthropy based on prestige and warm glow, *Journal of Public Economics* 67, 269–284.

Homans, G. (1961). *Social Behaviour: Its Elementary Forms.* London: Routledge.

Jecker, J. and Landy, D. (1969). Liking a person as a function of doing him a favor. *Human Relations* 22, 371–378.

Landry, C.E., Lange, A., List, J.A., Price, M.K., and Rupp, N.G. (2006). Toward an understanding of the economics of charity: Evidence from a field experiment. *Quarterly Journal of Economics* 121, 747–782.

Lee, L.C., Piliavin, J.A., and Call, V.R.A. (1999). Giving time, money, and blood: Similarities and differences. *Social Psychology Quarterly* 62, 276–290.

Levine, D. K. 1998. Modeling altruism and spitefulness in experiments. *Review of Economic Dynamics* 1, 593–622.

List, J.A. and Shogren, J.F. (1998): The deadweight loss of Christmas: comment. *American Economic Review* 88, 1350–1355.

Mailath, G., Okuno–Fujiwara, M. and Postlewaite, A. (1993). On belief based refinements in signaling games. *Journal of Economic Theory* 60, 241–276.

Mauss, M. (1925). *The gift: The form and reason for exchange in archaic societies.* (Original: Essai sur le Don.) English translation W.D. Halls, 1990. London: Routledge.

Myerson, R.B. (1985). Analysis of two bargaining problems with incomplete information, in A.E. Roth (ed.): *Game Theoretic Models of Bargaining,* Cambridge: Cambridge University Press.

Nelson, P.J. and Greene, K.V. (2003). *Signaling Goodness: Social Rules and Public Choice,* Ann Arbor: University of Michigan Press.

Offer, A. (1997). Between the gift and the market: The economy of regard. *Economic History Review* 50, 450–476.

Pollak, R.A. (1988). Tied transfers and paternalistic preferences. *American Economic Review Papers and Proceedings* 78, 240–244.

Prendergast, C. and Stole, L. (2001). The Non–monetary nature of gifts. *European Economic Review* 45, 1793–1810.

Robben, H.S.J and Verhallen, T.M.M. (1994). Behavioral costs as determinants of cost perception and preference formation for gifts to give and gifts to receive. *Journal of economic Psychology* 15, 333–350.

Satow, K. (1975). Social approval and helping. *Journal of Experimental Social Psychology* 11, 501–509.

Schwartz, B. (1967). The social psychology of the gift. *American Journal of Sociology* 73, 1–11.

Smith, A. (1753). *The Theory of Moral Sentiments.*

Soetevent, A. R. (2005). Anonymity in giving in a natural context – A field experiment in 30 churches. *Journal of Public Economics* 89, 2301–2323.

Solnick, S. and Hemenway, D. (1996): The deadweight loss of Christmas: comment. *American Economic Review* 86, 1299–1305.

Veblen, T. (1934). *The Theory of the Leisure Class.* New York: Modern Library.

Titmuss, R. (1971). *The Gift Relationship: From Human Blood to Social Policy.* London: George Allen and Unwin.

Waldfogel, J. (1993). The deadweight loss of Christmas. *American Economic Review* 83, 1328–1336.

Waldfogel, J. (1998). The deadweight loss of Christmas: reply. *American Economic Review* 88, 1358–1359.

Waldfogel, J. (2002). Gifts, cash, and stigma, *Economic Inquiry* 40, 415–27.

Webley, P. and Lea, S.E.G. (1993). The partial unacceptability of money in repayment for neighborly help. *Human Relations* 46, 65–76.

Wright, R. (1994). *The Moral Animal.* London: Brown and Company.

Zelitzer, V.A.R. (1994). *The Social Meaning of Money.* New Jersey: Princeton University Press.